MMS	Bridge & Deck Procedures BDP 04-00 Passage Planning App: 04-00A PASSAGE PLAN	Doc No: BDP-04-00A Revision : 03 Date: 01 Oct 2010 Issued by: COO Approved By: President Page 1

Vessel : **MT. MAERSK MISUMI** Voy . **74** Date : **17 Sep 2013**

Cargo : **HEAVY NAPTHA**

Departure Port : LOS ANGELES, CA. Local Time = UTC - 07.00 Hours

Destination Port : SAN FRANCISCO, CA. Local Time = UTC - 07.00 Hours

Distances

From		to			
From	*BERTH*	to	*PILOT STATION*	=	***3.00 n.m.***
From	*PILOT STATION*	to	*PILOT STATION*		***567.00 n.m.***
From		to		=	
From		to		=	

ETA (PILOT STATION TO PILOT STATION)

Total distance	***567.00 n.m.***	*Dep Date/Time (Enter UTC Time)*	***17 Sep 13 17:00 UTC***

Speed	*Propelling hours*	*Calculated ETA*
11.50 kts	*02 Days 01 Hours 18 Minutes*	***19 Sep 2013 @ 18:18 hours UTC***
12.00 kts	*01 Days 23 Hours 15 Minutes*	***19 Sep 2013 @ 16:15 hours UTC***
12.50 kts	*01 Days 21 Hours 21 Minutes*	***19 Sep 2013 @ 14:21 hours UTC***
13.00 kts	*01 Days 19 Hours 36 Minutes*	***19 Sep 2013 @ 12:36 hours UTC***
13.50 kts	*01 Days 18 Hours 00 Minutes*	***19 Sep 2013 @ 11:00 hours UTC***
14.00 kts	*01 Days 16 Hours 30 Minutes*	***19 Sep 2013 @ 09:30 hours UTC***

This Passage Plan contains following in Addition to this Cover Page

Document	***Pages***
Passage Plan Appraisal Checklist	1
Voyage Appraisal & Planning	2
Voyage Execution & Monitoring	2
Passage Plan (Berth - Pilot)	1
Passage Plan (Pilot - Pilot)	1

Prepared By: HENRY C. CORONA 2nd Officer	Approved by: CAPT. MARCELO C. GUIDAVEN JR. Master
Acknowledged By: REYMAR L. AMIT 3rd Officer	Acknowledged By: IVY B. LEGARIA Chief Officer
Acknowledged By:	Acknowledged By:

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Passage Plan Appraisal checklist (Please fill up by Hand)		
Item	***Yes/ No / N.A.***	***Remarks***
Have most appropiate Navigation Charts been selected by using chart Catalogue, All selected charts have been corrected upto NTM no. : Wk 37/13	Yes	
Have Publications been Selected including		
Sailing Direction (Pilot books) Corrected upto NTM No. : Wk 37/13	Yes	Latest NTM: Wk 37/13
Admirality List of Lights corrected upto NTM No. : Wk 37/13	Yes	
Admirality List of Radio signals corrected upto NTM No. : Wk 37/13	Yes	
Guide to Port entry	Yes	
Tide Tables & Tidal stream atlas	Yes	
Have all charts and Publications been corercted upto date with following		
Latest Local area warnings	Yes	
Navarea - Navigational warnings	Yes	
Has the Following been considered?		
Ship's Departure & Arrival drafts	Yes	
Ship's Cargo & any special cargo stowage/carriage restrictions	Yes	
Any Special operational requirements for this Voyage	Yes	
Have specific Marine Enviormental Protection Consideratins, requirments & measures been identified and taken into consideration	Yes	
Have you checked for any speed reduction areas on the Route and consulted Office / charterers in case Speed reductions are required (such as Mandatory Speed reduction areas off US for right whales)	N/A	
Has the Following been checked?		
Planning charts & publications for advice & recommendartions on route to be taken	Yes	
Climatological information for weather characteristics of the area	Yes	
Navigation charts and publications for landfall features	Yes	
Navigation charts and publications for ship's routeing schemes, ships reporting systems & VTS reportings	Yes	
Has Weather routeing been considered for the passage	Yes	
Have the following preparations been made for densination port		
Navigation charts & publications studied for pilotage requirements	Yes	
Ship to Shore Master/ pilot exchange form Prepared (BDP-03-03B)	Yes	
Pilot card updated	Yes	
Port guides studied for information including arrival/berthing/anchorage restrictions	Yes	

Dated	**Checked by**	**Confirmed by**
17 Sep 2013	**HENRY C. CORONA 2/Officer**	**CAPT. M.C. GUIDAVEN JR. Master**

Voyage Planning & Appraisal

Cargo for this voyage : Heavy Naptha

Special instructions for the cargo (especially if Hazardous), securing, stowage & distribution that may affect the Voyage

KEEP ALWAYS POSITIVE PRESSURE THE IG & KEEP MONITOR
OBSERVED STRICT OIL POLLUTION PREVENTION MEASURES AS PER MARPOL &
COMPANY'S ENVIRONMENTAL MANAGEMENT SYSTEM PROCEDURES
COMPANY OBJECTIVE ZERO OIL SPILL, ZERO ACCEDENT

Precautions for any onboard equipment / machinery defects which may affect normal navigation:

1.During navigation, primary method of fixing position is visual/radar fixes. Both radars to be on s/b during departure and approach.
2.GPS position to be confirmed by visual/radar fixes.
3.M/E on maneuvering speed before entering/Leaving the channel, and both steering motors to be keep on.
4.Confirmed Echo sounder is in good operation before navigating in shallow water area
5.exercise all caution when approaching all ports
6.keep good and safe clearance from fishing boats and nets,watch for shallow patches and keep well clear
7.call master anytime when duty officer has in doubt in safe navigation,keep a sharp look out at all times

Recommended / Required Routes and any alternate route (if provided and with reason)

RECOMMENDED ROUTE AS PER NP136 (OCEAN PASSAGES OF THE WORLD) AND APPLICABLE SAILING DIRECTIONS.

Nautical Publications for Reference

PORT AND TERMINAL GUIDE VOL.**4**
SAILING DIRECTION NP; **8**
ADMIRALTY TIDE TABLES VOL. Refer to ADP
ADMIRALTY LIST OF RADIO SIGNALS VOL. **281 (2), 282, 283(2), 284, 285, 286-ADP**
LIST OF LIGHTS AND FOG SIGNAL refer to **ADP**
ROUTEING CHARTS **5127 (9)**
NAVTEX STATION - **XII**
ADMIRALTY OCEAN PASSAGE OF THE WORLD.

Information to vessel traffic service including any required reporting points / instructions:

SEE ATTACHED LIST OF ALL REPORTING POINTS
BY ADRS ADP LIST.
VTS VHF CHANNEL PLS SEE ATTACHED LIST

COVERS PASSAGE FROM PILOT STATION TO PILOT STATION

The following items, but not Limited to, should be indicated on the chart for quick reference: (a) ABORT Point, (b) Contigency anchorage, © Margin of Safety, (d) Dangerous & NO GO Areas, (e) Distance off & Bearings from navigational dangers/landmarks, (f)

No.	WAY POINT Lat Long Name of Position	Sailing Method	Co. (True)	Dist (NM)	DTG (NM)	Leg Speed (Kts)	Steaming Time (dd:hh:mm)	UKC (mtrs)	Charts	Position Fixing Primary	 Secondary	Fix interval (min)	Remarks / Watch Level
01.	33° 41.30' N 118° 14.30' W Buoy No.3 -L.A. P/S				367.4								
		RL	156	2.1		06.0	00D 00H 21M	11.9	1081/ 1082	VISUAL/ RADAR	GPS	05 min or less	BW II.Caution to IN & OUT Traffic. Stanby fo Pilot Disembarkation..
02.	33° 39.35' N 118° 13.40' W L.A. Buoy No.1				365.3								
		RL	180	3.8		10.0	00D 00H 22M	13.2	1082/ 1063	VISUAL/ RADAR	GPS	05 min or less	BW I/II. Caution to In/ Out Traffic. Precautionary Area. VTIS Reporting.
03.	33° 35.50' N 118° 13.40' W Buoy 'S'				361.5								
		RL	160	17.4		12.5	00D 01H 23M	38.3	1063	RADAR	GPS	15 min or less	BW II/I. TSS & VTIS Area
04.	33° 19.10' N 118° 06.30' W Sta Catalina				344.1								
		RL	180	34.6		12.5	00D 02H 46M	668.0	899	RADAR	GPS	30 min or less	BW I. Caution to Exercise and Hazardous Operations Warning.Complied w/ CARB
05.	32° 44.50' N 118° 06.30' W San Clemente				309.5								
		RL	236	49.6		12.5	00D 03H 58M	701.0	899	RADAR	GPS	30 min or less	BW I. Caution to Exercise and Hazardous Operations Warning.
06.	32° 17.00' N 118° 55.00' W Bishop Rock				259.9								
		RL	270	88.8		12.5	00D 07H 06M	940.0	2530	GPS	RADAR	60 min or less	BW I. Caution to Exercise and Hazardous Operations Warning.
07.	32° 17.00' N 120° 40.00' W Deviation Pt.				171.1								
		RL	329	25.6		12.5	00D 02H 02M	2595.0	2530	GPS	RADAR	60 min or less	BW I. Caution to Exercise and Hazardous Operations Warning.
08.	35° 30.00' N 123° 00.00' W Piedra Blanca				145.5								
		RL	357	119.3		12.5	00D 09H 32M	729.0	299	GPS	RADAR	60 min or less	BW I. Caution to Exercise and Hazardous Operations Warning.Complied w/ CARB
09.	37° 29.10' N 123° 08.60' W Sn Francisco Rep.Line				26.2								
		RL	057	21.0		12.5	00D 01H 40M	15.3	299	RADAR	GPS	30 min or less	BW I/II. 2 Stmg Motor On. E-Sounder On.Caution to IN & OUT Traffic.
10.	37° 40.50' N 122° 46.50' W Sn Francisco TSS				5.2								
		RL	049	5.2		12.5	00D 00H 24M	10.3	299/ 591	RADAR	GPS	15 min or less	BW II.Caution to IN & OUT Traffic. Stanby t Pick Up Pilot..
11.	37° 43.90' N 122° 41.60' W Sn Francisco P/S				0.0								

COVERS PASSAGE FROM BERTH TO PILOT STATION

The following items, but not Limited to, should be indicated on the chart for quick reference: (a) ABORT Point, (b) Contigency anchorage, © Margin of Safety, (d) Dangerous & NO GO Areas, (e) Distance off & Bearings from navigational dangers/landmarks, (f)

No.	*WAY POINT* Lat Long Name of Position	*Sailing Method*	*Co. (True)*	*Dist (NM)*	*DTG (NM)*	*Leg Speed (Kts)*	*Steaming Time (dd:hh:mm)*	*UKC (mtrs)*	*Charts*	*Position Fixing* Primary	Secondary	*Fix interval (min)*	*Remarks / Watch Level*
01.	33° 44.05' N 118° 16.47' W Berth 238				**3.3**								
02.	33° 43.08' N 118° 16.08' W Main Channel	RL	*168*	*1.0*	**2.3**	*08.0*	**00D 00H 07M**	04.2	1081	VISUAL/ RADAR	GPS	*05 min or less*	BW II, Prepare for Unmooring
03.	33° 42.60' N 118° 14.91' W L.A. Breakwater	RL	*116*	*1.1*	**1.2**	*08.0*	**00D 00H 08M**	16.3	1081	VISUAL/ RADAR	GPS	*05 min or less*	BW II, Caution to NO Go Areas, Monitor UKC,Use P.I.
04.	33° 41.50' N 118° 14.40' W L.A. P/S	RL	*159*	*1.2*	**0.0**	*08.0*	**00D 00H 09M**	15.3	1081	VISUAL/ RADAR	GPS	*05 min or less*	BW II, Caution to NO Go Areas, Prepare for Pilot disembarkation

MMS	Bridge & Deck Procedures	Doc No.: BDP-03-14A
	BDP	Revision : 05 Date: 14 May 2013
	03-00 Bridge Procedures	Issued by: COO Approved By: President
	App: 03-14A UKC CALCULATIONS	Page 1 of 1

Vessel : MAERSK MISUMI *Port* LOS ANGELES *List / Heel* - *Date* *17 SEPTEMBER 2013*

Below UKC Calculations are made for vsl's location at	Berth 238	Off Berth	Buoy No.5 & 6	Main Channel	Break Water	Buoy No.5 & 6	-	L.A. P/S
Vessel Is expected to be at above Place at TIME -	0930 LT	0945 LT	0955 LT	1005 LT	1015 LT	1020 LT		1030 LT
Vessel Draught Characteristics:								
A1. Max SW Draft	8.75 M	8.75 M	8.75 M	8.75 M	8.75 M	8.75 M	-	8.75 M
A2. Fresh / Brackish Water Allowance (if any)	-	-	-	-	-	-	-	-
A3. Correction due to List: (ref BDP-03-00 Part-3, 3.14.1.7)	8.75 M	8.75 M	8.75 M	8.75 M	8.75 M	8.75 M	-	8.75 M
A4. Draft (A1) corrected for A2 & A3	8.75 M	8.75 M	8.75 M	8.75 M	8.75 M	8.75 M	-	8.75 M
A5. Estimated Maximum Transit speed	-	6.0 Kts	8.0 Kts	8.0 Kts	8.0 Kts	6.0 Kts	-	6.0 Kts
A6. Estimated Squat: (ref BDP-03-00 Part-3, 3.14.1.6)	-	0.56 M	1.00 M	1.00 M	1.00 M	0.56 M	-	0.56 M
A7. Deepest Draft (A4 + A6)	8.75 M	9.31 M	9.75 M	9.75 M	9.75 M	9.31 M	-	8.75 M
Water Depths & Anticipated Tide:								
B1. Depth of transit channel (from charts at shallowest point)	12.8	17.19	25.9	16.4	24.9	25.9	-	24
B2. Anticipated tide (from tide tables)	1.3	1.2	1.2	1.1	1	0.9	-	0.8
B3. Available Depth (corrected for tide)	**14.10 M**	**18.39 M**	**27.10 M**	**17.50 M**	**25.90 M**	**26.80 M**	-	**24.80 M**
Under-keel Clearance:								
C1. Clearance during transit: (B3-A7)	**5.35 M**	**9.08 M**	**17.35 M**	**7.75 M**	**16.15 M**	**17.49 M**	-	**16.05 M**
C2. Weather related water level change: (+/-)	-	-	-	-	-	-	-	-
C3. Effective UKC available: (C1 – C2)	**5.35 M**	**9.08 M**	**17.35 M**	**7.75 M**	**16.15 M**	**17.49 M**	-	**16.05 M**
COMPANY REQUIRED UKC	**0.6**	**0.6**	**0.6**	**9.63**	**9.63**	**9.63**	-	**9.63**

Prepared By - Duty Officer **Master** **Pilot (if Applicable)**

Notes - 1. A copy of the above calculations must be kept on board and attached to the Passage Plan (BDP-04-00A). In case of any doubt, the Company shall be consulted. 2. Not to be sent to office.
3. The maximum draft used for UKC calculation to be the deepest draft, which may be the draft at the Aft Perpendicular, not necessarily being the reading at the draft mark.
4. C2 is due to factors including but not limited to sea / swell or the effect of stream/current passing under a moored or anchored ship in shallow waters.

MMS	Bridge & Deck Procedures BDP 03-00 Bridge Procedures App: 03-14A SQUAT / LIST CALCULATIONS	Doc No.: BDP-03-xxx Revision : 00 Date: xx May 2013 Issued by: COO Approved By: President Page 1 of 1

Vessel	MAERSK MISUMI	**Expected Width of Channel**	200.00 Mtrs
Port	Los Angeles	**Max Draft**	8.75 Mtrs
LBP	172.00 Mtrs	**Displacement**	37503 MT
Beam	32.20 Mtrs	**Block Coefficient (Cb)**	0.7739

Calculating the effects of squat for the passage plan, consideration should be given to determining the maximum speed permissible that will avoid contravening the minimum UKC required, rather than simply determining the UKC for a proposed transit speed. The following formulae should be used to calculate SQUAT

Squat = (V2 (In Knots) X Block Coefficient)/100

Where Block Coefficient = Displacement / (Mean Draft X LOA X Breadth).

When navigating in particularly shallow waters (< draft + 5m) and/or narrow waters (< 4 x beam), where interaction with the bottom/channel sides is a concern, the effects of squat can be as much as double the results of the above formula for open water.

The increase in draft due to heel/list can be calculated using the formula:

Increase in Draft = (Beam X Sine Angle of Heel)/2

SQUAT CALCULATIONS

Speed	Open waters	Confined /Pilotage Waters
2.0 Knots	*0.03 mtrs*	***0.06 mtrs***
3.0 Knots	*0.07 mtrs*	***0.14 mtrs***
4.0 Knots	*0.12 mtrs*	***0.24 mtrs***
5.0 Knots	*0.19 mtrs*	***0.38 mtrs***
6.0 Knots	*0.28 mtrs*	***0.56 mtrs***
7.0 Knots	*0.38 mtrs*	***0.76 mtrs***
8.0 Knots	*0.50 mtrs*	***1.00 mtrs***
9.0 Knots	*0.63 mtrs*	***1.26 mtrs***
10.0 Knots	*0.77 mtrs*	***1.54 mtrs***
.0 Knots	*0.94 mtrs*	***1.88 mtrs***
12.0 Knots	*1.11 mtrs*	***2.22 mtrs***
13.0 Knots	*1.31 mtrs*	***2.62 mtrs***
14.0 Knots	*1.52 mtrs*	***3.04 mtrs***
15.0 Knots	*1.74 mtrs*	***3.48 mtrs***
16.0 Knots	*1.98 mtrs*	***3.96 mtrs***
17.0 Knots	*2.24 mtrs*	***4.48 mtrs***
18.0 Knots	*2.51 mtrs*	***5.02 mtrs***
19.0 Knots	*2.79 mtrs*	***5.58 mtrs***
20.0 Knots	*3.10 mtrs*	***6.20 mtrs***

INCREASE IN DRAFT DUE TO HEEL/LIST CALCULATIONS

Angle of Heel	Increase in Draft
4.00 Deg	***1.12 mtrs***
3.75 Deg	***1.05 mtrs***
3.50 Deg	***0.98 mtrs***
3.25 Deg	***0.91 mtrs***
3.00 Deg	***0.84 mtrs***
2.75 Deg	***0.77 mtrs***
2.50 Deg	***0.70 mtrs***
2.25 Deg	***0.63 mtrs***
2.00 Deg	***0.56 mtrs***
1.75 Deg	***0.49 mtrs***
1.50 Deg	***0.42 mtrs***
1.25 Deg	***0.35 mtrs***
1.00 Deg	***0.28 mtrs***
0.75 Deg	***0.21 mtrs***
0.50 Deg	***0.14 mtrs***
0.25 Deg	***0.07 mtrs***

Prepared By - Duty Off

Master

Notes - 1. A copy of the above calculations must be kept on board and attached to the Passage Plan (BDP-04-00A). In case of any doubt, the Company shall be consulted. 2. Not to be sent to office.

The responsibility of verifying the formula's rests with the user , pls ensure formauls is not corrupted

Retention Period 1 yr

9351 Los Angeles Harbour
33°43'N 118°16'W United States Saturday, September 14, 2013 +0800
Data Area 8. Pacific Ocean, New Zealand, N & S America (W coast) Version 12

9/14/2013	
1:00 AM	0.3 m
2:00 AM	0.5 m
3:00 AM	0.8 m
4:00 AM	1.0 m
5:00 AM	1.2 m
6:00 AM	1.2 m
7:00 AM	1.2 m
8:00 AM	1.1 m
9:00 AM	0.9 m
10:00 AM	0.8 m
11:00 AM	0.8 m
12:00 PM	0.9 m
1:00 PM	1.0 m
2:00 PM	1.2 m
3:00 PM	1.5 m
4:00 PM	1.6 m
5:00 PM	1.7 m
6:00 PM	1.6 m
7:00 PM	1.4 m
8:00 PM	1.1 m
9:00 PM	0.7 m
10:00 PM	0.4 m
11:00 PM	0.1 m

9/15/2013	
12:00 AM	0.0 m
1:00 AM	0.1 m
2:00 AM	0.3 m
3:00 AM	0.6 m
4:00 AM	0.9 m
5:00 AM	1.2 m
6:00 AM	1.3 m
7:00 AM	1.3 m
8:00 AM	1.2 m
9:00 AM	1.0 m
10:00 AM	0.8 m
11:00 AM	0.7 m
12:00 PM	0.6 m
1:00 PM	0.7 m
2:00 PM	0.9 m
3:00 PM	1.2 m
4:00 PM	1.5 m
5:00 PM	1.7 m
6:00 PM	1.8 m
7:00 PM	1.7 m
8:00 PM	1.4 m
9:00 PM	1.1 m
10:00 PM	0.6 m
11:00 PM	0.3 m

9/16/2013	
12:00 AM	0.0 m
1:00 AM	0.0 m
2:00 AM	0.1 m
3:00 AM	0.4 m
4:00 AM	0.7 m
5:00 AM	1.1 m
6:00 AM	1.4 m
7:00 AM	1.5 m
8:00 AM	1.4 m
9:00 AM	1.2 m
10:00 AM	0.9 m
11:00 AM	0.7 m
12:00 PM	0.5 m
1:00 PM	0.4 m
2:00 PM	0.6 m
3:00 PM	0.9 m
4:00 PM	1.2 m
5:00 PM	1.5 m
6:00 PM	1.8 m
7:00 PM	1.8 m
8:00 PM	1.7 m
9:00 PM	1.4 m
10:00 PM	1.0 m
11:00 PM	0.5 m

9/17/2013	
12:00 AM	0.2 m
1:00 AM	0.0 m
2:00 AM	0.0 m
3:00 AM	0.2 m
4:00 AM	0.6 m
5:00 AM	1.0 m
6:00 AM	1.3 m
7:00 AM	1.6 m
8:00 AM	1.6 m
9:00 AM	1.4 m
10:00 AM	1.1 m
11:00 AM	0.8 m
12:00 PM	0.5 m
1:00 PM	0.3 m
2:00 PM	0.3 m
3:00 PM	0.5 m
4:00 PM	0.8 m
5:00 PM	1.2 m
6:00 PM	1.6 m
7:00 PM	1.8 m
8:00 PM	1.8 m
9:00 PM	1.7 m
10:00 PM	1.3 m
11:00 PM	0.8 m

9/18/2013	
12:00 AM	0.4 m
1:00 AM	0.1 m
2:00 AM	0.0 m
3:00 AM	0.1 m
4:00 AM	0.4 m
5:00 AM	0.8 m
6:00 AM	1.2 m
7:00 AM	1.5 m
8:00 AM	1.7 m
9:00 AM	1.6 m
10:00 AM	1.4 m
11:00 AM	1.0 m
12:00 PM	0.6 m
1:00 PM	0.3 m
2:00 PM	0.2 m
3:00 PM	0.2 m
4:00 PM	0.5 m
5:00 PM	0.9 m
6:00 PM	1.3 m
7:00 PM	1.6 m
8:00 PM	1.8 m
9:00 PM	1.8 m
10:00 PM	1.5 m
11:00 PM	1.1 m

9/19/2013	
12:00 AM	0.7 m
1:00 AM	0.3 m
2:00 AM	0.1 m
3:00 AM	0.1 m
4:00 AM	0.3 m
5:00 AM	0.6 m
6:00 AM	1.1 m
7:00 AM	1.5 m
8:00 AM	1.7 m
9:00 AM	1.8 m
10:00 AM	1.6 m
11:00 AM	1.3 m
12:00 PM	0.8 m
1:00 PM	0.4 m
2:00 PM	0.2 m
3:00 PM	0.1 m
4:00 PM	0.2 m
5:00 PM	0.5 m
6:00 PM	0.9 m
7:00 PM	1.3 m
8:00 PM	1.6 m
9:00 PM	1.7 m
10:00 PM	1.7 m
11:00 PM	1.4 m

9/20/2013	
12:00 AM	1.0 m
1:00 AM	0.6 m
2:00 AM	0.3 m
3:00 AM	0.1 m
4:00 AM	0.2 m
5:00 AM	0.5 m
6:00 AM	0.9 m
7:00 AM	1.3 m
8:00 AM	1.6 m
9:00 AM	1.8 m
10:00 AM	1.8 m
11:00 AM	1.5 m
12:00 PM	1.1 m
1:00 PM	0.7 m
2:00 PM	0.3 m
3:00 PM	0.1 m
4:00 PM	0.1 m
5:00 PM	0.2 m
6:00 PM	0.6 m
7:00 PM	1.0 m
8:00 PM	1.3 m
9:00 PM	1.6 m
10:00 PM	1.6 m
11:00 PM	1.5 m

9/21/2013	
12:00 AM	1.2 m

Predicted heights are in metres above Chart Datum